

REMARKS

This is a Response to the Office Action mailed August 22, 2007, in which a three (3) month Shortened Statutory Period for Response expired on November 22, 2007. A one month extension has been requested and paid for, set to expire on December 22, 2007. Nineteen (19) claims, including two (2) independent claims, were paid for in the application. Claims 1 and 19 are currently amended. No new matter has been added to the application. No fee for additional claims is due by way of this Amendment. Upon entry of the amendments herewith, claims 1-19 remain pending.

I. Request for Telephone Interview

In light of the specific rejections and Examiner's indications in the final Office Action, the attorney of record (David V. Carlson) believes that agreement could be reached during a telephone interview. Mr. Carlson would answer any questions that the Examiner may have and further discuss the presented recordable media technology in order to reach agreement. At the Examiner's convenience, a telephone call to Mr. Carlson at 206-622-4900 is respectfully encouraged.

II. Amendments According to Examiner's Observation

An earnest effort has made to place all claims in condition for allowance so the patent can be passed to issue. The attorney of record understands that this is a final Office Action. Accordingly, in order to facilitate entry of this amendment, the Examiner's suggestion regarding the irreversibly changed nature of a 'write-once' type recording medium has been adopted, and the independent claims have been amended into a form that the Examiner will find allowable so that the case can be advanced to issue.

As stated, independent claims 1 and 19 have been amended to be allowable based on the cited references of record and the distinction recognized by the Examiner so that further searching and further consideration is not necessary. In order to assist the Examiner in understanding the allowable subject matter of claims 1 and 19, the following remarks are provided.

III. Rejections under 35 U.S.C. § 103

At sections 2 through 4 of the Office Action (pages 2-9), claims 1-6 and 13-19 were rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over *Kojima et al.*, (**U.S. Publication 2002/0024913 A1**), hereinafter *Kojima*. Claims 7-12 were rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over *Kojima*, in view of *Hintz*, (**U.S. Pat. 5,458,941**), hereinafter *Hintz*.

It is well established at law that, for a proper rejection of a claim under 35 U.S.C. § 103(a) as being obvious based upon a combination of references, the cited combination of references must disclose, teach, or suggest, either implicitly or explicitly, all elements and/or features of the claim at issue. See, e.g., *In Re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988), and *In re Keller*, 208 U.S.P.Q. 871, 881 (C.C.P.A. 1981). The applicants do not agree with the above stated rejections. However, the applicants believe that the present independent claims, which have been amended to expedite the application toward allowance, are clearly patentable and that all the remaining claims are also patentable.

a. *Kojima* does not disclose an irreversibly writable structure

i. Independent Claim 1

Prior to the current amendments, the final Office Action indicated that Claim 1 did not exclusively define write-once recording media, but instead related to general recording media. The final Office Action also indicated that even though Claim 1 was not anticipated by *Kojima* because *Kojima* does not specifically show that the recording medium is a write-once recording medium, Claim 1 would have been obvious to one of ordinary skill in the art. On the contrary, however, Claim 1 is not obvious because the different and additional characteristics found in the structure of rewritable recording media are not generally common to write-once recording media.

For example, *Kojima* teaches that recording layers may be reversibly transformed in phase between crystalline and amorphous states by irradiating particular locations on the layers with a high or lower power laser beam and then rapidly or slowly cooling the location

(page 1, paragraph [0004]. That is, *Kojima* teaches structures formed of materials that may take on crystalline and amorphous states, such as Ge, Sn, Sb, and Te (page 5, paragraph [0062]). On the other hand, as stated in the final Office Action, a write-once recording medium may include two films in the recording layer that are made from different metals. Subsequently, when a particular location on the write-once recording layer is irradiated, the two metals are fused together irreversibly. However, it is also recognized that a recording layer of a write-once recording medium is not necessarily formed from a two-metal structure. Instead, for example, the recording layer of a write-once recording medium may be formed of other materials, such as an organic dye. Thus, Claim 1 is not amended to include recording layers of specific, dissimilar metal composition.

Nevertheless, in order to move the present application toward allowance, Claim 1 has been amended to recite “at least one information recording layer … constituted so as to be irreversibly changed when the laser beam is projected thereonto.” Claim 1, as amended, is admittedly not anticipated by *Kojima*, and Claim 1 is not obvious in light of *Kojima* because *Kojima* teaches a particular structure having a re-writable composition. Accordingly Claim 1 is now in condition for allowance.

ii. Independent Claim 19

As discussed above, *Kojima* does not anticipate, nor render obvious, an irreversibly changeable recording layer. The structures of recording layers in re-writable media are significantly different than the structures of recording layers in the claimed write-once media. Accordingly, for at least the reason that amended Claim 19 recites “at least one information recording layer … structured to be irreversibly changeable when the laser beam is projected therethrough,” independent Claim 19 is now in condition for allowance.

b. The single information recording layer of *Hintz* is not properly combined with the multiple layer structure of *Kojima*

i. Dependent Claim 7

Dependent Claim 7 is allowable for at least the reason that *Hintz* does not disclose structure applicable to recording media that has multiple information recording layers.

Dependent claim 7 recites particular structure of the first and second recording films and the Markush groups from which a primary element of each film must be selected, and parent Claim 1 recites “a plurality of information recording layers.” In contrast, the optical recording media disclosed in *Hintz* includes only a single information recording layer having a first recording layer 18 and a second recording layer 20. Since the dependency on the light transmittance of a particular layer is related to the number of information recording layers in the medium, the single information recording layer of *Hintz* does not consider a dependency on light transmittance. Accordingly, *Hintz* does not disclose, teach, or suggest the features of claim 7.

More particularly, as a first distinction between *Hintz* and the combination of claims 1 and 7 in the present application, *Hintz* does not disclose, teach, or suggest that “the dependency X of light transmittance of the ... recording layer ... on the wavelength of a laser beam locally becomes minimal.” As a further distinction, *Hintz* does not disclose, teach, or suggest that “the dependency X of light transmittance of the recording layer ... on the wavelength of a laser beam is smaller than $1.2 \cdot X_2$, where X_2 is the wavelength dependency corresponding to the second smallest thickness D_2 .” Such teachings are not related to single layer recording media. Thus, one of ordinary skill in the art would have no motivation to replace an information recording layer other than the farthest information recording layer from the light incidence plane taught by *Kojima* (and formed of a phase change material) with the single information recording layer taught by *Hintz*.

The recitations of combined claims 1 and 7 are neither disclosed in *Hintz* nor obvious. In optical recording media having the structure of *Hintz*, a laser beam irradiates only *Hintz*’s single information recording layer. There are no other information recording layers, and so there is neither a reason to question the light transmittance of the single recording layer, nor is there a reason to select particular layer thicknesses to achieve the light transmittance dependence values recited in the combined structure of claims 1 and 7. That is, it would not be obvious for

one of ordinary skill in the art to combine the structure of *Hintz* with the structure of *Kojima*. Accordingly, claim 7 is further allowable.

IV. Conclusion

This amendment is made in order to reach agreement on the present claims and have the case advanced to allowance. Overall, the *Kojima* reference alone, or with the addition of *Hintz* in any motivated combination, does not disclose, teach, or suggest what is recited in the amended independent claims. Thus, given the above remarks, it is respectfully submitted that the presently rejected independent claims are in condition for allowance. The dependent claims that depend directly or indirectly on these independent claims are likewise allowable based on at least the same reasons and based on the recitations contained in each dependent claim.

If a teaching in any of the cited references that is relevant to the allowability of the claims has been overlooked, the Examiner is requested to specifically point out where such teaching may be found. Further, if there are any informalities or questions that can be addressed via telephone, the Examiner is encouraged to contact Mr. Carlson at (206) 622-4900.

All of the claims remaining in the application are now clearly believed to be allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

The Director is authorized to charge any additional fees due by way of this Amendment only, or credit any overpayment, to our Deposit Account No. 19-1090.

Respectfully submitted,
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